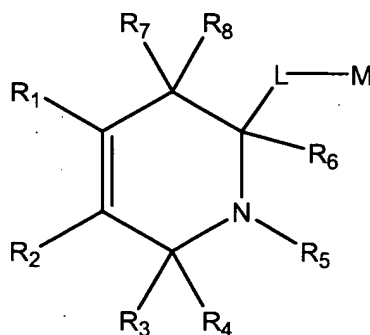


What is claimed is:

1. A compound comprising the formula:



wherein

R₁ and R₂ are taken together to form a substituted or unsubstituted aromatic ring;

R₃ and R₄ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, and a thiocarbonyl group or where R₃ and R₄ are taken together to form a ring;

R₅ is selected from a group of substituents that comprise a moiety attached to the ring nitrogen selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R₆ is selected from a group of substituents that comprise a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R₇ and R₈ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonylamino, nitro, cyano, halogen, hydroxyl, thiol, amino, a carbonyl group, and a thiocarbonyl group, or R₇ and R₈ are taken together to form a substituent comprising a moiety attached to the ring carbon selected from the group consisting of a carbonyl, thiocarbonyl, imine, alkene and ring;

M is a substituent capable of complexing with a protein metal ion; and

L is a substituent comprising a chain of 3-12 atoms connecting the M substituent to the carbon atom alpha to the L substituent.

2. A compound according to claim 1, wherein R_1 and R_2 are selected such that the substituted or unsubstituted aromatic ring formed when R_1 and R_2 are taken together is a substituted or unsubstituted aryl ring.

3. A compound according to claim 1, wherein R_1 and R_2 are selected such that an aryl ring is formed that is substituted and comprises one or more substituents that together form a ring fused to the aryl ring.

4. A compound according to claim 1, wherein R_1 and R_2 are selected such that an aryl ring is formed that is a substituted or unsubstituted phenyl ring.

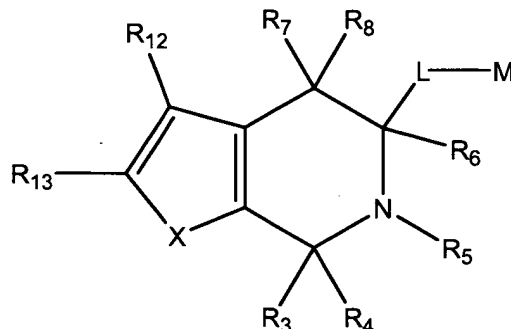
5. A compound according to claim 4, wherein R_1 and R_2 are selected such that the phenyl ring is substituted and comprises one or more substituents that together form a ring fused to the phenyl ring.

6. A compound according to claim 1, wherein R_1 and R_2 are selected such that an aryl ring is formed that is a substituted or unsubstituted heteroaryl ring.

7. A compound according to claim 1, wherein R_1 and R_2 are selected such that a substituted or unsubstituted heteroaryl ring is formed that is selected from the group of substituted or unsubstituted heteroaryl rings consisting of furan, thiofuran, pyrrole, pyrazole, imidazole, triazole, isoxazole, oxazole, thiazole, isothiazole, pyridine, pyridazine, pyrimidine, pyrazine, benzofuran, benzothiofuran, indole, quinoline, isoquinoline, cinnoline, naphthyridine, and pyridopyridine.

8. A compound according to claim 1, wherein R_1 and R_2 are selected such that a substituted or unsubstituted fused heteroaryl ring is formed

9. A compound comprising the formula



wherein

R_3 and R_4 are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, and a thiocarbonyl group or where R_3 and R_4 are taken together to form a ring;

R_5 is selected from a group of substituents that comprise a moiety attached to the ring nitrogen selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R_6 is selected from a group of substituents that comprise a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R_7 and R_8 are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonylamino, nitro, cyano, halogen, hydroxyl, thiol, amino, a carbonyl group, and a thiocarbonyl group, or R_7 and R_8 are taken together to form a substituent comprising a moiety

attached to the ring carbon selected from the group consisting of a carbonyl, thiocarbonyl, imine, alkene and ring;

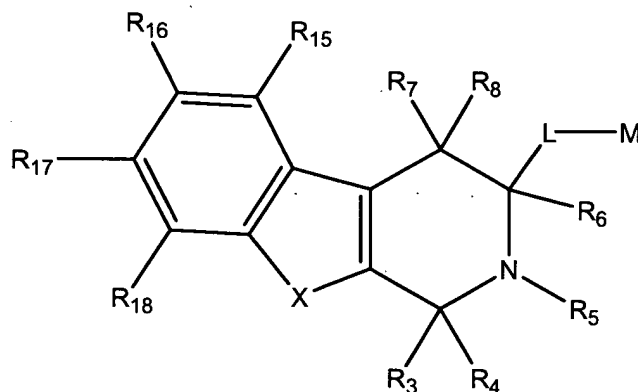
R_{12} and R_{13} are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonylamino, nitro, cyano, halogen, hydroxyl, thiol, amino, a carbonyl group, and a thiocarbonyl group, or R_7 and R_8 are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 membered ring;

X is selected from the group consisting of O, S, and NR_{14} , where R_{14} comprises a moiety attached to the nitrogen selected from the group consisting of hydrogen, hydroxyl, alkyl, aromatic ring, alkoxy, aryloxy, a carbonyl group, a thiocarbonyl group, and a sulfonyl group;

M is a substituent capable of complexing with a protein metal ion; and

L is a substituent comprising a chain of 3-12 atoms connecting the M substituent to the carbon atom alpha to the L substituent.

10. A compound comprising the formula:



wherein

R_3 and R_4 are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, and a thiocarbonyl group or where R_3 and R_4 are taken together to form a ring;

R₅ is selected from a group of substituents that comprise a moiety attached to the ring nitrogen selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R₆ is selected from a group of substituents that comprise a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R₇ and R₈ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonylamino, nitro, cyano, halogen, hydroxyl, thiol, amino, a carbonyl group, and a thiocarbonyl group, or R₇ and R₈ are taken together to form a substituent comprising a moiety attached to the ring carbon selected from the group consisting of a carbonyl, thiocarbonyl, imine, alkene and ring;

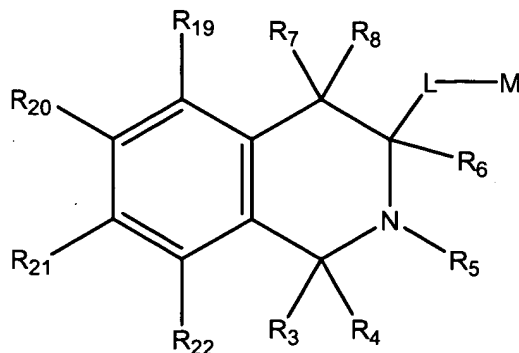
R₁₅, R₁₆, R₁₇ and R₁₈ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonylamino, nitro, cyano, halogen, hydroxyl, thiol, amino, a carbonyl group, and a thiocarbonyl group, except where R₁₅ and R₁₆, R₁₆ and R₁₇, and/or R₁₇ and R₁₈ are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 membered ring;

X is selected from the group consisting of O, S, and NR₁₄, where R₁₄ comprises a moiety attached to the nitrogen selected from the group consisting of hydrogen, hydroxyl, alkyl, aromatic ring, alkoxy, aryloxy, a carbonyl group, a thiocarbonyl group, and a sulfonyl group;

M is a substituent capable of complexing with a protein metal ion; and

L is a substituent comprising a chain of 3-12 atoms connecting the M substituent to the carbon atom alpha to the L substituent.

11. A compound comprising the formula:



wherein

R₃ and R₄ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, and a thiocarbonyl group or where R₃ and R₄ are taken together to form a ring;

R₅ is selected from a group of substituents that comprise a moiety attached to the ring nitrogen selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R₆ is selected from a group of substituents that comprise a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R₇ and R₈ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonylamino, nitro, cyano, halogen, hydroxyl, thiol, amino, a carbonyl group, and a thiocarbonyl group, or R₇ and R₈ are taken together to form a substituent comprising a moiety attached to the ring carbon selected from the group consisting of a carbonyl, thiocarbonyl, imine, alkene and ring;

R₁₉, R₂₀, R₂₁ and R₂₂ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen,

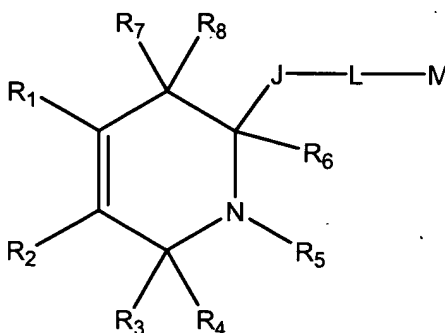
alkyl, aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonylamino, nitro, cyano, halogen, hydroxyl, thiol, amino, a carbonyl group, and a thiocarbonyl group, except where R_{19} and R_{20} , R_{20} and R_{21} , and/or R_{21} and R_{22} are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 membered ring;

X is selected from the group consisting of O, S, and NR_{14} , where R_{14} comprises a moiety attached to the nitrogen selected from the group consisting of hydrogen, hydroxyl, alkyl, aromatic ring, alkoxy, aryloxy, a carbonyl group, a thiocarbonyl group, and a sulfonyl group;

M is a substituent capable of complexing with a protein metal ion; and

L is a substituent comprising a chain of 3-12 atoms connecting the M substituent to the carbon atom alpha to the L substituent.

12. A compound comprising the formula:



wherein

R_1 and R_2 are taken together to form a substituted or unsubstituted aromatic ring;

R_3 and R_4 are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, and a thiocarbonyl group or where R_3 and R_4 are taken together to form a ring;

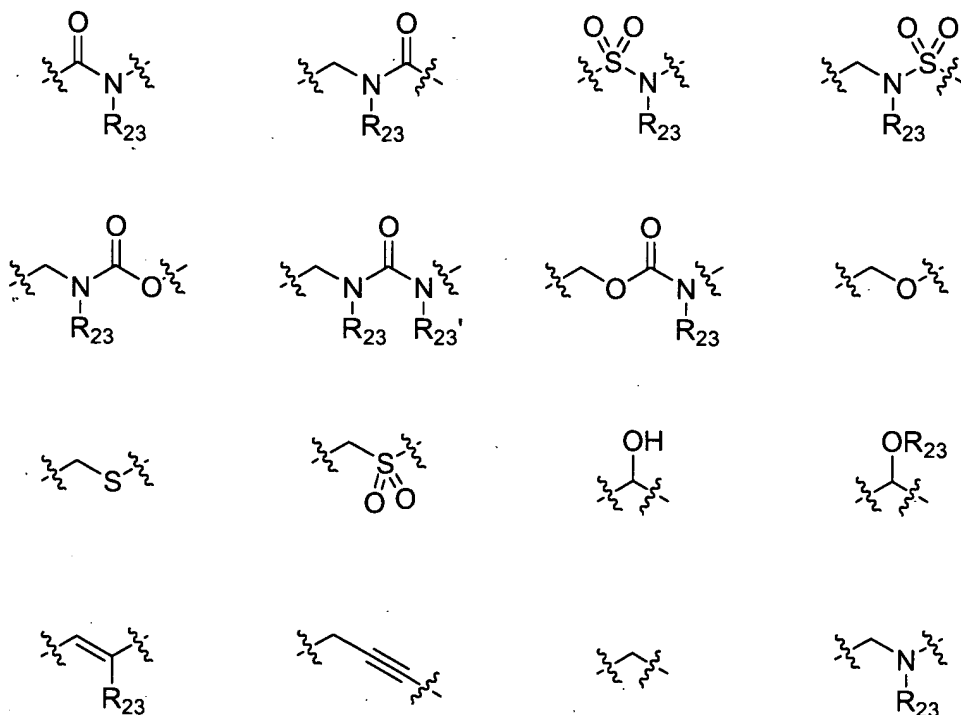
R_5 is selected from a group of substituents that comprise a moiety attached to the ring nitrogen selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R₆ is selected from a group of substituents that comprise a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R₇ and R₈ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonylamino, nitro, cyano, halogen, hydroxyl, thiol, amino, a carbonyl group, and a thiocarbonyl group, or R₇ and R₈ are taken together to form a substituent comprising a moiety attached to the ring carbon selected from the group consisting of a carbonyl, thiocarbonyl, imine, alkene and ring;

M is a substituent capable of complexing with a protein metal ion;

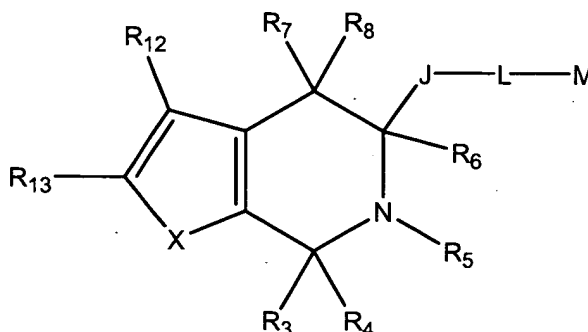
J is selected from the group consisting of



where R₂₃ is a C₁₋₁₀ alkyl; and

L is a substituent comprising a chain of 3-12 atoms connecting the M substituent to the J substituent.

13. A compound comprising the formula



wherein

R₃ and R₄ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, and a thiocarbonyl group or where R₃ and R₄ are taken together to form a ring;

R₅ is selected from a group of substituents that comprise a moiety attached to the ring nitrogen selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R₆ is selected from a group of substituents that comprise a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R₇ and R₈ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonylamino, nitro, cyano, halogen, hydroxyl, thiol, amino, a carbonyl group, and a thiocarbonyl group, or R₇ and R₈ are taken together to form a substituent comprising a moiety attached to the ring carbon selected from the group consisting of a carbonyl, thiocarbonyl, imine, alkene and ring;

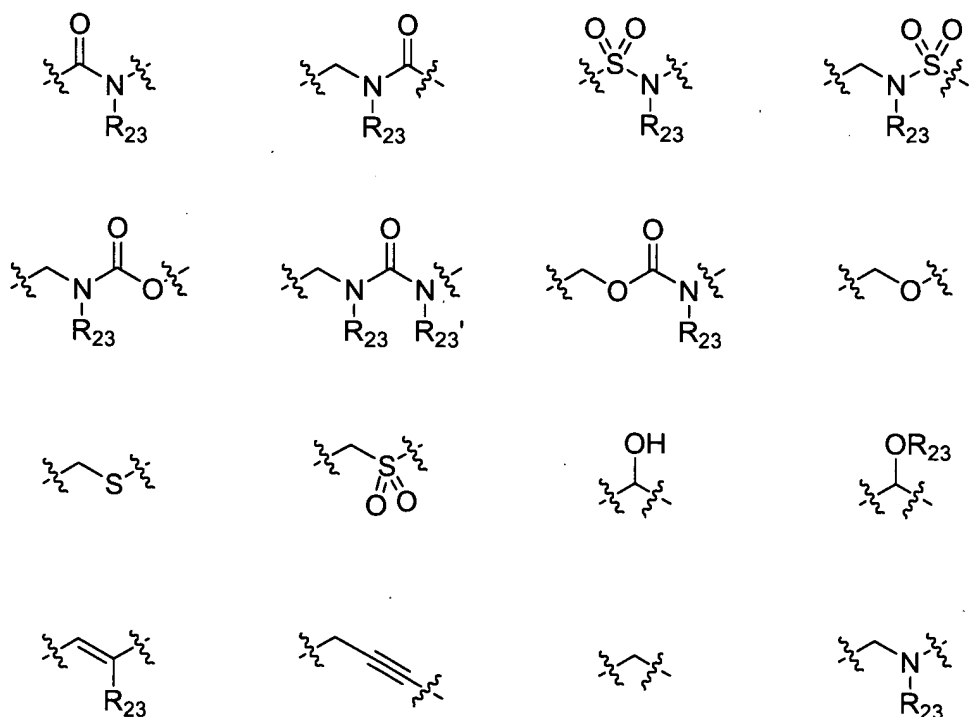
R₁₂ and R₁₃ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl,

aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonylamino, nitro, cyano, halogen, hydroxyl, thiol, amino, a carbonyl group, and a thiocarbonyl group, or R_7 and R_8 are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 membered ring;

X is selected from the group consisting of O, S, and NR_{14} , where R_{14} comprises a moiety attached to the nitrogen selected from the group consisting of hydrogen, hydroxyl, alkyl, aromatic ring, alkoxy, aryloxy, a carbonyl group, a thiocarbonyl group, and a sulfonyl group;

M is a substituent capable of complexing with a protein metal ion;

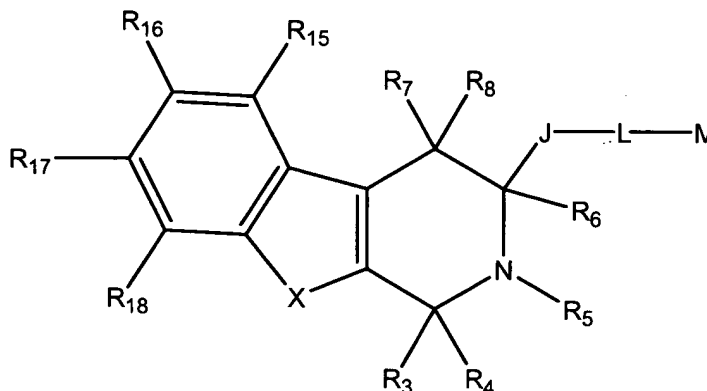
J is selected from the group consisting of



where R_{23} is a C_{1-10} alkyl; and

L is a substituent comprising a chain of 3-12 atoms connecting the M substituent to the J substituent.

14. A compound comprising the formula:



wherein

R₃ and R₄ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, and a thiocarbonyl group or where R₃ and R₄ are taken together to form a ring;

R₅ is selected from a group of substituents that comprise a moiety attached to the ring nitrogen selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R₆ is selected from a group of substituents that comprise a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R₇ and R₈ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonylamino, nitro, cyano, halogen, hydroxyl, thiol, amino, a carbonyl group, and a thiocarbonyl group, or R₇ and R₈ are taken together to form a substituent comprising a moiety attached to the ring carbon selected from the group consisting of a carbonyl, thiocarbonyl, imine, alkene and ring;

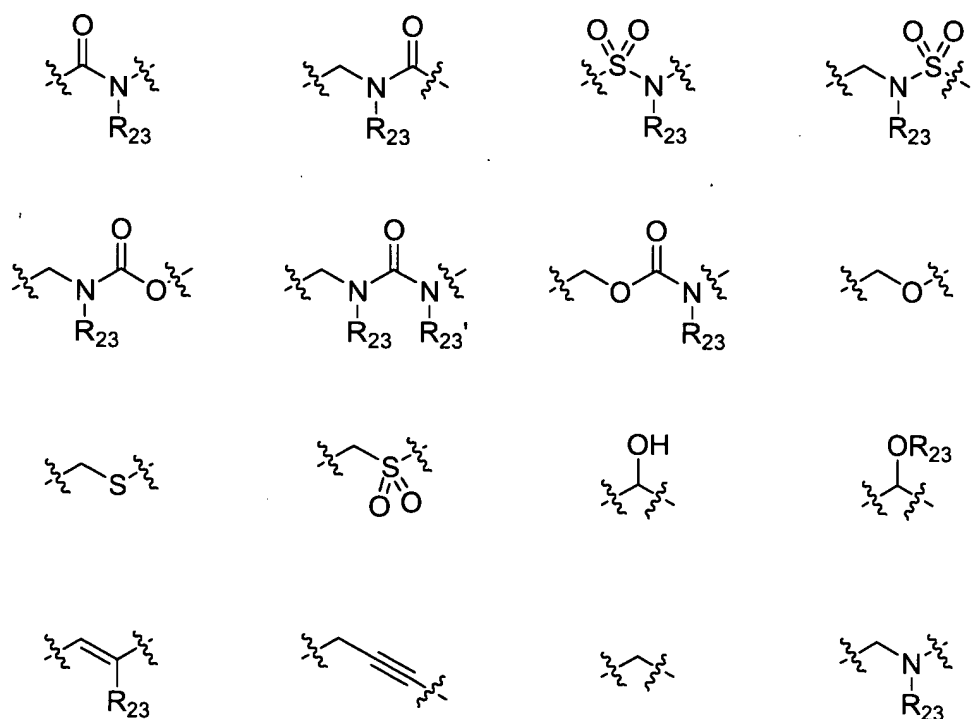
R₁₅, R₁₆, R₁₇ and R₁₈ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen,

alkyl, aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonylamino, nitro, cyano, halogen, hydroxyl, thiol, amino, a carbonyl group, and a thiocarbonyl group, except where R_{15} and R_{16} , R_{16} and R_{17} , and/or R_{17} and R_{18} are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 membered ring;

X is selected from the group consisting of O, S, and NR_{14} , where R_{14} comprises a moiety attached to the nitrogen selected from the group consisting of hydrogen, hydroxyl, alkyl, aromatic ring, alkoxy, aryloxy, a carbonyl group, a thiocarbonyl group, and a sulfonyl group;

M is a substituent capable of complexing with a protein metal ion;

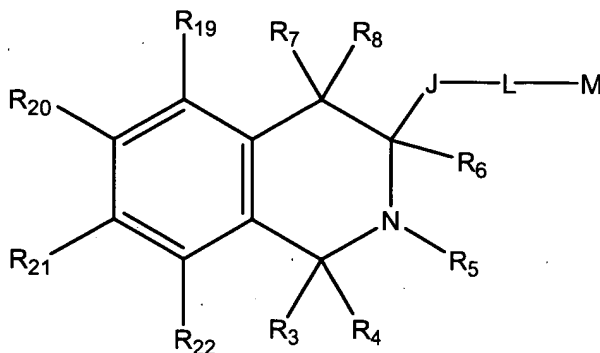
J is selected from the group consisting of



where R_{23} is a C_{1-10} alkyl; and

L is a substituent comprising a chain of 3-12 atoms connecting the M substituent to the J substituent.

15. A compound comprising the formula:



wherein

R₃ and R₄ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, and a thiocarbonyl group or where R₃ and R₄ are taken together to form a ring;

R₅ is selected from a group of substituents that comprise a moiety attached to the ring nitrogen selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R₆ is selected from a group of substituents that comprise a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, cyano, a carbonyl group, a thiocarbonyl group and a sulfonyl group;

R₇ and R₈ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonylamino, nitro, cyano, halogen, hydroxyl, thiol, amino, a carbonyl group, and a thiocarbonyl group, or R₇ and R₈ are taken together to form a substituent comprising a moiety attached to the ring carbon selected from the group consisting of a carbonyl, thiocarbonyl, imine, alkene and ring;

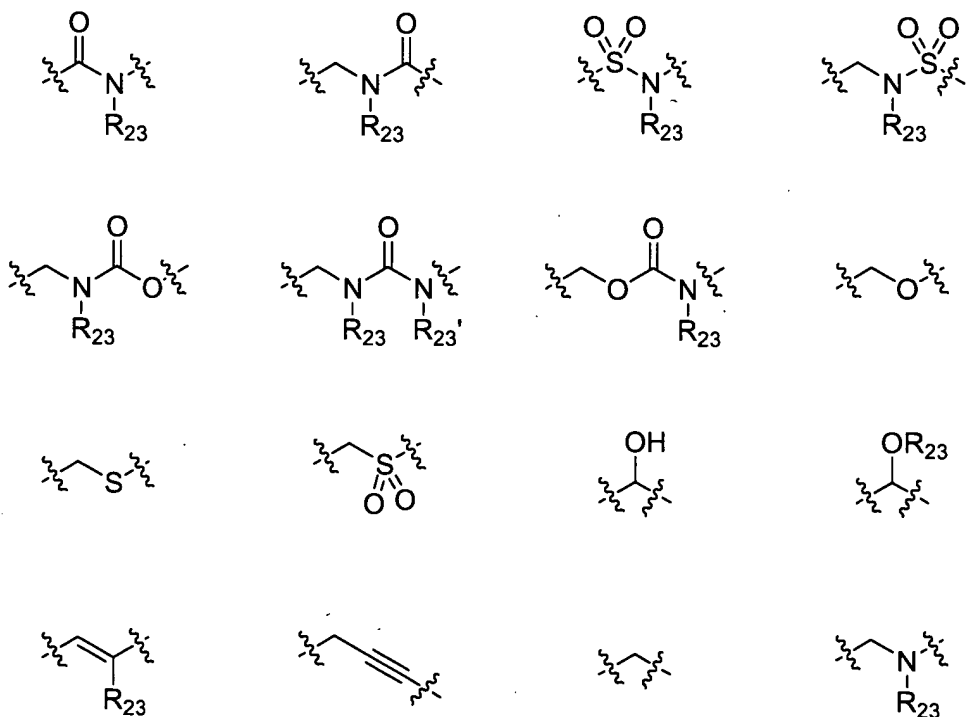
R₁₉, R₂₀, R₂₁ and R₂₂ are each independently selected from a group of substituents comprising a moiety attached to the ring carbon selected from the group consisting of hydrogen,

alkyl, aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonylamino, nitro, cyano, halogen, hydroxyl, thiol, amino, a carbonyl group, and a thiocarbonyl group, except where R_{19} and R_{20} , R_{20} and R_{21} , and/or R_{21} and R_{22} are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 membered ring;

X is selected from the group consisting of O, S, and NR_{14} , where R_{14} comprises a moiety attached to the nitrogen selected from the group consisting of hydrogen, hydroxyl, alkyl, aromatic ring, alkoxy, aryloxy, a carbonyl group, a thiocarbonyl group, and a sulfonyl group;

M is a substituent capable of complexing with a protein metal ion;

J is selected from the group consisting of



where R_{23} is a C_{1-10} alkyl; and

L is a substituent comprising a chain of 3-12 atoms connecting the M substituent to the J substituent.

16. A compound according to claim 1, wherein at least one of R_3 and R_4 is selected from a group of substituents where the moiety attached to the ring carbon is a C_1 - C_{10} alkyl, aminoalkyl, or oxaalkyl.

17. A compound according to claim 1, wherein at least one of R₃ and R₄ is selected from a group of substituents where the moiety attached to the ring carbon is a branched C₁- C₁₀ alkyl, aminoalkyl, or oxaalkyl.

18. A compound according to claim 17, wherein the C₁- C₁₀ alkyl, aminoalkyl, or oxaalkyl further comprises a substituent selected from the group consisting of an alkyl, aromatic ring, cyano group, halogen, and carbonyl group.

19. A compound according to claim 17, wherein the C₁- C₁₀ alkyl, aminoalkyl, or oxaalkyl further comprises a substituted or unsubstituted aromatic ring.

20. A compound according to claim 1, wherein at least one of R₃ and R₄ is selected from a group of substituents where the moiety attached to the ring carbon is an aromatic ring.

21. A compound according to claim 1, wherein at least one of R₃ and R₄ is selected from a group of substituents where the moiety attached to the ring carbon is a substituted or unsubstituted phenyl ring.

22. A compound according to claim 1, wherein at least one of R₃ and R₄ is selected from a group of substituents where the moiety attached to the ring carbon is a substituted or unsubstituted heteroaryl.

23. A compound according to claim 1, wherein at least one of R₃ and R₄ is selected from a group of substituents where the moiety attached to the ring carbon is a substituted or unsubstituted heteroaryl selected from the group consisting of furan, thiofuran, pyrrole, pyrazole, isoimidazole, triazole, isoxazole, oxazole, thiazole, isothiazole, oxadiazole, oxatriazole, pyridine, pyridazine, pyrimidine, pyrazine, triazine, benzofuran, isobenzofuran, benzothiofuran, isobenzothiofuran, indole, isobenzazole, quinoline, isoquinoline, cinnoline, quinazoline, naphthyridine, and pyridopyridine.

24. A compound according to claim 1, wherein R₃ and R₄ are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 membered ring.
25. A compound according to claim 1, wherein R₃ and R₄ are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 member alicyclic ring.
26. A compound according to claim 1, wherein at least one of R₃ and R₄ is selected from a group of substituents where the moiety attached to the ring carbon is selected from the group consisting of an aldehyde, amide, ester, ketone, and carboxylic acid.
27. A compound according to claim 1, wherein R₅ and R₆ are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 membered ring.
28. A compound according to claim 1, wherein R₅ and R₆ are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 alicyclic ring.
29. A compound according to claim 1, wherein R₆ and R₇ are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 membered ring.
30. A compound according to claim 1, wherein R₆ and R₇ are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 alicyclic ring.
31. A compound according to claim 1, wherein R₇ and R₈ are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 membered ring.
32. A compound according to claim 1, wherein R₇ and R₈ are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 alicyclic ring.
33. A compound according to claim 1, wherein R₇ and R₈ are taken together to form an imine having a substituent R₉ on the imine nitrogen selected from the group consisting of

hydrogen, alkyl, aminoalkyl, oxaalkyl, aromatic ring, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, and sulfonylamino.

34. A compound according to claim 1, wherein R_7 and R_8 are taken together to form an alkene substituent having the formula $=CR_{10}R_{11}$ where R_{10} and R_{11} are each independently selected from a group of substituents consisting of hydrogen, halogen, alkyl, aryl, alkoxy, aryloxy, alkylamino, arylamino, alkylthio, arylthio, acylamino, sulfonylamino, cyano, nitro, a carbonyl group, thiocarbonyl, and sulfonyl or where R_{10} and R_{11} are taken together to form an alkene.

35. A compound according to claim 1, wherein R_7 and R_8 are taken together to form an alkene substituent having the formula $=CR_{10}R_{11}$ where R_{10} and R_{11} are together together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 membered ring.

36. A compound according to claim 35 wherein R_{10} and R_{11} are taken together to form a substituted or unsubstituted 3, 4, 5, 6, 7 or 8 member alicyclic ring.

37. A compound according to claim 1, wherein M is selected from the group consisting of:

